

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

LOWER SALFORD TOWNSHIP
AUTHORITY, *et al.*,

Plaintiff,

v.

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Defendant.

Civil Action

No. 11-cv-6489

MEMORANDUM OPINION

Goldberg, J.

May 7, 2025

In 2008, the United States Environmental Protection Agency (“EPA”) established a pollution limit, known as a total maximum daily load (“TMDL”), for Indian Creek Watershed, located in Montgomery County, Pennsylvania. Plaintiffs—Lower Salford Township Authority, Lower Salford Township, Franconia Sewer Authority and Franconia Township (collectively “Plaintiffs”)—operate municipal separate stormwater systems and wastewater treatment plants that discharge into Indian Creek Watershed.

Plaintiffs challenge the EPA’s establishment of a TMDL for Indian Creek, arguing that: (1) the EPA did not have authority to establish a TMDL for the entirety of Indian Creek or for the nutrient phosphorus; (2) the EPA improperly revised Pennsylvania’s water quality standards; and (3) the establishment of the Indian Creek TMDL was arbitrary and capricious because the EPA relied on flawed methodology, failed to consider public comments challenging the flawed methodology, and applied the TMDL year-round.

Currently pending are the Parties' Cross Motions for Summary Judgment. For the reasons set forth below, the EPA's Motion will be granted, and Plaintiffs' Motion will be denied.

I. FACTUAL BACKGROUND¹

A. Clean Water Act

The Federal Water Pollution Control Act ("Clean Water Act" or "CWA") was passed to "restore and maintain the physical, biological and chemical integrity of the Nation's waters." 33 U.S.C. § 1251(a); 40 C.F.R. § 101(a). Under the CWA, states are responsible for establishing, subject to EPA approval and ongoing review, water quality standards for all bodies of water within its boundaries. 33 U.S.C. § 1313; 40 C.F.R. § 130.3. Water quality standards designate the use(s) for a body of water and water quality criteria are developed to protect those uses. 40 C.F.R. § 130.3. Water quality criteria can be expressed either as a specific numeric quantity ("numeric form") or a descriptive statement ("narrative form"). 40 C.F.R. § 131.3(b).

If water quality standards are not met, the water body is designated as "impaired" by specific pollutants. 33 U.S.C. § 1313(d); 40 C.F.R. § 130.7(b). Pursuant to Section 303(d) of the CWA, states are required to maintain a list of impaired water bodies ("Section 303(d) List"). U.S.C. § 1313(d); 40 C.F.R. § 130.7(b). States must submit this list to the EPA for approval every two years and the EPA must approve or disapprove within 30 days. 40 C.F.R. § 130.7(d)(1). If the EPA approves of a state's Section 303(d) List, the state is required to develop TMDLs for every water body on the list. If the EPA disapproves, it must identify the impaired waters within the state and establish TMDLs. 40 C.F.R. § 130.7(d)(2).

¹ Unless otherwise stated, the following undisputed facts are taken from the parties' joint appendix (ECF No. 113), the pages of which are Bates stamped "EPA" or "2014AR."

A TMDL establishes the maximum daily amount of a pollutant that a water body can receive and still meet applicable water quality standards, considering seasonal variations and a margin of safety. 33 U.S.C. § 1313(d)(1)(C); 40 C.F.R. § 130.7. TMDLs allocate the pollutant load between two sources: point sources and nonpoint sources. Point sources are “discernible, confined, and discrete conveyances,” like a pipe or well. 40 CFR § 260.10. Nonpoint sources are “diffuse sources of pollution, like farms or roadways, from which runoff drains into a watershed.” Am. Farm Bureau Fed’n v. United States EPA, 792 F.3d 281, 289 (3d Cir. 2015). The portion of the pollutant load allocated to nonpoint sources is called a “load allocation” and the portion allocated to point sources is called a “wasteload allocation.” 40 C.F.R. § 130.2(i).

B. Indian Creek Watershed and Pennsylvania’s 303(d) Program

Pennsylvania’s water quality standard for nutrients uses narrative criteria, stating that “water may not contain substances attributable to point or nonpoint source discharges in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life.” 25 Pa. Code § 93.6.

In 1996, the Pennsylvania Department of Environmental Protection (“PADEP”) placed Indian Creek Watershed on its Section 303(d) List because it failed to meet its designated use of supporting aquatic life. (EPA0007649.) The 1996 Section 303(d) List identified 0.6 miles of Indian Creek as impaired by “Dissolved Solids” and 0.5 miles as impaired by “Other.” (EPA0007649.) In 1998, Pennsylvania’s Section 303(d) List identified 1.26 miles of Indian Creek Watershed as impaired with the source/cause of impairment listed as “unknown.” (EPA0001554.) In 2004, Pennsylvania’s Section 303(d) List was updated to include additional impaired miles and identified the pollutants as “Nutrients,” “Siltation,” “Salinity/TDS/Chlorides,” and “cause unknown.” (EPA0001045.)

C. The 1996 Consent Agreement and PADEP-EPA Agreements on TMDL Responsibilities

In 1996, the American Littoral Society and Public Interest Research Group of Pennsylvania sued the EPA for allegedly failing to comply with Section 303(d). (EPA0007550.) The lawsuit was resolved in 1997 by the filing of a consent decree. (EPA0007548). The consent decree required PADEP to establish TMDLs for the bodies of water on its 1996 Section 303(d) List within ten years. If PADEP failed to do so, the EPA was required to establish the TMDLs.

To comply with the consent decree, the EPA and PADEP entered into a memorandum of understanding to coordinate efforts to establish TMDLs. (EPA0007585-89.) Over the next ten years, the EPA and PADEP worked together and established TMDLs for many impaired water bodies on the 1996 Section 303(d) List. PADEP asked the EPA to establish several “larger, more complex TMDLs,” including the Indian Creek TMDL. (EPA0007685-86.) Five water bodies, including Indian Creek Watershed, were still missing TMDLs as the deadline approached so the EPA filed a motion to modify the consent decree in 2007. (EPA0007673.) The motion was granted, and the deadline was extended to June 30, 2008. (EPA0007671.)

D. The 2008 Indian Creek Phosphorus TMDL

Since Pennsylvania’s water quality standard for nutrients uses narrative criteria, the EPA must translate the narrative criteria into a numerical value by identifying the pollutant and determining “the level of nutrients that will achieve compliance with the narrative standard.” (EPA0007676.) Pennsylvania identified total phosphorus, a type of nutrient, as one of the pollutants causing Indian Creek Watershed’s impairment, and the EPA noted in the modified consent decree that the water quality problem was “excessive nutrients, which reduce dissolved oxygen and contribute to excessive algae growth.” (EPA0007676.)

Pursuant to the consent decree, the EPA established the Indian Creek TMDL for total phosphorus in 2008. (EPA00000003.) The TMDL establishes a target concentration (“endpoint”) for total phosphorus, as well as wasteload and load allocations for sources of total phosphorus pollution. (EPA00000082-85.) To develop the total phosphorus TMDL, the EPA relied on a report (the “2007 Nutrient Endpoint Report”) prepared by Tetra Tech, a consulting firm. Tetra Tech relied on three approaches—“frequency distribution based analysis, stressor-responses analyses, and literature based values”—to develop TMDLs for six streams in southeastern Pennsylvania, including Indian Creek Watershed. (EPA0012503.) Tetra Tech used data from sites within Pennsylvania, Maryland, and New Jersey because these states have “similar geology” to the six watersheds and “similar climatic conditions.” (EPA0012504.) The 2007 Nutrient Endpoint Report recommended a total phosphorus endpoint of 40 µg/L. (EPA0012528.)

The EPA received public comments from February 27 to April 18, 2008, for the proposed TMDL. (EPA0000116.) On June 30, 2008, the EPA published “Response Document for Nutrient and Sediment TMDLS in Pennsylvania for Southampton Creek, Indian Creek, Chester Creek, Paxton Creek and Sawmill Run” which contained “the EPA responses to all comments received during the Public Comment period.” (EPA0000115.) On the same day, the EPA published the Indian Creek TMDL, adopting Tetra Tech’s recommendation for a total phosphorus endpoint of 40 µg/L. (EPA00000003.)

In 2010, the Telford Borough Authority sought reconsideration and withdrawal of the Indian Creek nutrient TMDL. (2014AR-00727.) In response to objections raised by the scientific community, the EPA asked its Scientific Advisory Board’s Ecological Processes and Effects Committee to review a draft guidance document describing “approaches and methods for developing numeric criteria for nutrients” which specifically focused on use of the stressor-

response analysis. (2014AR-00259.) On April 27, 2010, that Board issued a report with recommendations to improve the draft guidance document. (2014AR-00259-60.) The report stated that the draft guidance should clearly identify its “scope and intended use” and clarify that the stressor-response approach should “be used with other available methodologies in the context of a tiered approach.” (2014AR-00260.) The Board report concluded that the “stressor-response approach is a legitimate, scientifically based method for developing numeric nutrient criteria if the approach is appropriately applied (i.e., not used in isolation but as part of a weight-of-evidence approach).” (2014AR-00259.)

In 2012, Tetra Tech revised the 2007 Nutrient Endpoint Report (“2012 Nutrient Endpoint Report”). The report added additional lines of evidence, including a mechanistic model, but maintained the same recommendation of a total phosphorus nutrient endpoint of 40 µg/L. On March 21, 2014, the EPA issued a document entitled “Reconsideration Decision and Rationale Nutrient and Sediment TMDLs for the Indian Creek Watershed, Pennsylvania” reaffirming the Indian Creek nutrient TMDL issued in 2008. (2014AR-00725.)

II. PROCEDURAL HISTORY

Plaintiffs filed suit on October 17, 2011, alleging that establishment of the Indian Creek TMDL violated the Clean Water Act. The case was originally assigned to the Honorable C. Darnell Jones. (ECF No. 1.) Thereafter, litigation of this matter was considerably delayed when Judge Jones placed the case in civil suspense while the parties engaged in protracted settlement discussions. (ECF Nos. 38, 56.) In December of 2022, I was reassigned the case. In November of 2023, the EPA’s pending motion to dismiss was dismissed by agreement and Plaintiffs amended their claim. (ECF Nos. 100, 102.) On February 5, 2024, the parties filed cross motions for summary judgment. (ECF Nos. 109, 110.) The case returned to active status in April of 2024.

III. STANDARD OF REVIEW

Under Federal Rule of Civil Procedure 56, summary judgment is appropriate “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). But “[j]udicial review of a summary judgment motion based on the [Administrative Procedure Act] differs from the review of a typical summary judgment motion.” Romanyuk v. Lynch, 151 F. Supp. 3d 559, 563 (E.D. Pa. 2015). Under the Administrative Procedure Act, I must set aside an agency’s decision if it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). Lastly, when reviewing an agency action, “the focal point for judicial review should be the administrative record already in existence, not some new record made initially in the reviewing court.” Camp v. Pitts, 411 U.S. 138, 142 (1973).

IV. DISCUSSION

A. **Count One: Exceeded Statutory Authority**

Count One of Plaintiffs’ Complaint alleges that the EPA exceeded its statutory authority under the CWA by establishing the Indian Creek TMDL. Neither party disputes that the EPA was obligated under the consent decree to establish TMDLs for any impaired body of water on the 1996 303(d) Section List if Pennsylvania did not establish TMDLs by the deadline. (ECF Nos. 109 at 19-20, 112 at 1.) PADEP asked the EPA to establish several “larger, more complex TMDLs,” including the Indian Creek TMDL. (EPA0007685-86.) Plaintiffs argue that the consent decree limits the scope of the Indian Creek TMDL to only those pollutants and water quality limited segments—specific portions of the watershed—that are explicitly identified on the 1996 Section 303(d) List. (ECF No. 109 at 19.)

The consent decree states that “[i]f Pennsylvania fails to establish TMDLs for all [water quality limited segments] identified on Pennsylvania’s 1996 Section 303(d) list according to the schedule below, then EPA shall establish TMDLs for the balance of the water quality limited segments for which Pennsylvania has not established TMDLs” (EPA0007561-0007562.) Based on this language, Plaintiffs contend that the EPA can only establish TMDLs for the pollutants and portions of Indian Creek identified on the 1996 Section 303(d) List and that, therefore, a TMDL addressing nutrients in the entire Indian Creek Watershed is outside the EPA’s authority. (ECF No. 109 at 20.)

I disagree with Plaintiffs and conclude that the establishment of a nutrient TMDL for the entirety of Indian Creek Watershed is within the scope of the consent decree. With respect to the pollutant issue, the EPA points out that the 1996 Section 303(d) List identifies “Indian Creek” as impaired by “Dissolved Solids” and “Other,” which is a catch-all category encompassing nutrients. (ECF No. 112 at 2.) Plaintiffs have not raised any compelling reason why the Indian Creek TMDL should not address phosphorus, a nutrient, when it has since been determined that one of the “other” impairments is excessive nutrients. Accordingly, the establishment of a TMDL for nutrients was consistent with the consent decree.

The geographic scope of the TMDL is also consistent with the consent decree. The 1996 Section 303(d) List identifies the “Stream Name” as “Indian Creek” and lists “Miles Degraded” as “0.6” and “0.5.” (EPA0007649.) The list does not identify specific segments of the watershed as impaired using GPS coordinates or other identifying information. The list also notes that “Miles Degraded are based on the Length of the Study Segment,” indicating that other portions of the water body outside the study could be impaired. (EPA0007649.) It is impossible to determine,

based on the information provided in the 1996 Section 303(d) List, what portions of Indian Creek Watershed would fall within the scope of the consent decree if Plaintiffs' argument were accepted.

Plaintiffs' interpretation would also lead to absurd results. The EPA would be required to develop a nutrient TMDL for certain miles of Indian Creek Watershed, while Pennsylvania simultaneously established a nutrient TMDL for segments in the same water body. This would be a waste of resources and inconsistent with the purpose of the consent decree—to establish TMDLs in a timely manner. And, as the EPA explains, a “the geographic scope of a TMDL is a function of a variety of factors, including the type of waterbody that is impaired and how far apart various impairments are from each other,” so a TMDL may need to be applied to the entire waterbody to address impairments in different segments. (ECF No. 112 at 4.) Accordingly, the establishment of a TMDL for the entire Indian Creek Watershed was consistent with the consent decree.

Moreover, even if the scope of the consent decree were limited, the EPA would still have statutory authority to establish a nutrient TMDL for Indian Creek Watershed. Plaintiffs assert that the EPA's obligation to establish the Indian Creek TMDL comes from the consent decree and the EPA has no authority to establish the Indian Creek TMDL under the CWA. (ECF No. 111 at 1-2.) But the EPA cannot usurp a state's power by consent decree. The obligations created by the consent decree must be permissible under federal law and “further the objectives of the law upon which the complaint was based.” See Local No. 93, Int'l Ass'n of Firefighters, etc. v. Cleveland, 478 U.S. 501, 525-26 (1986).

Under Section 1313(d)(2) of the CWA, states have the primary responsibility to submit a Section 303(d) List—identifying impaired waters and TMDLs—for approval by the EPA. If disapproved, the responsibility shifts to the EPA to identify the impaired waters and establish TMDLs. The CWA is silent on what happens when a state fails to submit a Section 303(d) List

altogether, but courts have found that when “a state has ‘clearly and unambiguously’ decided that it will not submit TMDLs for the entire state, that decision will be ‘construed as a constructive submission of no TMDLs, which in turn triggers the EPA’s nondiscretionary duty to act.’” Columbia Riverkeeper v. Wheeler, 944 F.3d 1204, 1208 (9th Cir. 2019) (quoting San Francisco BayKeeper v. Whitman, 297 F.3d 877, 881 (9th Cir. 2002)).

If a state fails to issue TMDLs over a long period of time, the duty to establish TMDLs shifts to the EPA under the constructive submission doctrine. Scott v. City of Hammond, 741 F.2d 992, 996 (7th Cir. 1984). Here, PADEP has not taken any steps towards establishing a nutrient TMDL for Indian Creek since 1996 and, instead, asked the EPA to establish it. Hayes v. Whitman, 264 F.3d 1017, 1023 (10th Cir. 2001) (“The constructive-submission theory turns on whether the state has determined not to submit a required TMDL for a given impaired waterbody.”) Accordingly, the EPA had authority under the constructive submission doctrine to establish a nutrient TMDL for Indian Creek Watershed.

B. Count Two: Unlawful Revision of State Water Quality Standards

In Count Two, Plaintiffs claim that the EPA unlawfully revised and amended Pennsylvania’s water quality standards in violation of the CWA. Plaintiffs assert that the existing water quality standards require the nutrient endpoint to be based solely on dissolved oxygen levels associated with excessive algae growth, so by relying on macroinvertebrate health, the EPA deviated from the established standards. (ECF No. 109 at 23-24.)

A TMDL must be “established at a level necessary to implement the applicable water quality standards[.]” 33 U.S.C. § 1313(d)(1)(C). Pennsylvania’s water quality standards use narrative criteria for nutrients and state that water bodies cannot contain pollutants in “concentrations or amounts sufficient to be inimical or harmful to the water uses to be protected

or to human, animal, plant or aquatic life.” 25 Pa. Code § 93.6. “The designated use for streams in the Indian Creek Watershed is to provide habitat and appropriate ecological uses as a trout stocking fishery.” (2014AR-00733.) Therefore, to identify a pollution target, the EPA must determine what numeric value of phosphorus can enter Indian Creek without harming aquatic life.

The EPA does not dispute that nutrient impairments are associated with excessive algae and low levels of dissolved oxygen. (EPA0007676.) Pennsylvania’s water quality standards, however, do not state that other metrics, like macroinvertebrate health, cannot be used to develop a nutrient endpoint. The stressor-response methodology relied on by the EPA uses both algal and macroinvertebrate metrics. (EPA0012509-10.) The EPA explains that it considered macroinvertebrate health—in addition to other metrics—to develop the Indian Creek phosphorus TMDL because macroinvertebrate health “is often a function of nuisance algal growth and attendant periods of lower dissolved oxygen levels.” (ECF No. 109 at 16.) Excessive algae growth affects the “macroinvertebrate community by providing an increased food supply for opportunistic invertebrates that use algae as a food source.” (EPA0000194.) The EPA notes that “[m]acroinvertebrate data shows long term impacts where algal biomass shows short term impacts.” (EPA0000194.)

The EPA’s consideration of macroinvertebrate health to develop the TMDL does not deviate from Pennsylvania’s established water quality standards. Macroinvertebrate metrics, in conjunction with other metrics, were used to determine a numerical value that meets Pennsylvania’s narrative water quality standards by protecting aquatic life. Accordingly, the EPA’s use of macroinvertebrate metrics to develop the phosphorus TMDL was not contrary to law.

C. Counts Three, Four, and Five: Arbitrary or Capricious Establishment of TMDL

In Counts Three, Four, and Five, Plaintiffs challenge the EPA’s establishment of the Indian Creek TMDL. Specifically, Plaintiffs claim that the EPA’s reliance on flawed methodology, failure to properly consider outside comments, and establishment of the TMDL year-round was arbitrary and capricious.

“Grounds for concluding that the agency acted arbitrarily and capriciously include its reliance on factors outside those Congress intended for consideration, a complete failure by the agency to consider an important aspect of the problem, or an agency’s explanation contrary to, or implausible in light of, the evidence.” Fertilizer Inst. v. Browner, 163 F.3d 774, 777 (3d Cir. 1998). The arbitrary and capricious standard is “highly deferential, presume[s] the agency action to be valid and requires affirming the agency action if a reasonable basis exists for its decision.” Kern Cnty. Farm Bureau v. Allen, 450 F.3d 1072, 1076 (9th Cir. 2006) (internal punctuation omitted). An agency must “examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’” Motor Vehicle Mfrs. Ass’n of United States, Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (quoting Burlington Truck Lines v. United States, 371 U.S. 156, 168 (1962)).

Based on the above standards, and for the following reasons, I conclude that the EPA’s establishment of the Indian Creek TMDL was not arbitrary or capricious.

1. Flawed Methodology

Plaintiffs first argue that the EPA failed to establish a causal connection between excessive nutrients and Indian Creek’s use impairment so the issuance of a TMDL for nutrients was arbitrary or capricious. (Am. Compl. ¶¶ 156-57, 160.) But nutrients were identified as an impairment before the EPA established the Indian Creek TMDL at issue in this case. In 2004, PADEP—not the

EPA—updated its 303(d) list to identify nutrients as a cause of impairment and the EPA approved. (EPA0001045.) To the extent that Plaintiffs challenge the EPA’s approval of the 2004 303(d) list, I find that the EPA’s approval was not arbitrary or capricious.

“We may not ‘substitute [our] judgment for that of the agency,’ and will uphold the agency’s decision so long as it was reasonable.” United Ref. Co. v. United States EPA, 64 F.4th 448, 456 (3d Cir. 2023) (quoting Citizens to Pres. Overton Park, Inc. v. Volpe, 401 U.S. 402, 416 (1971)). The EPA points to sufficient evidence to support its finding that the PADEP’s inclusion of Indian Creek on the 303(d) list was proper. In its reconsideration decision, the EPA responded to comments that Indian Creek was not impaired by nutrients, noting that “all data to date support PADEP’s identification of a nutrient impairment in Indian Creek in 303(d) lists from 2004-2012.” (2014AR-00F732.) PADEP field assessments indicated that Indian Creek had elevated levels of phosphorous and nitrogen “likely contributing to the presence of thick algal mats.” (2014AR-00729.) Excess nutrients “can cause algal blooms that deplete available oxygen and kill off aquatic organisms.” (EPA0008670.) Data gathered by PADEP in 2013 also showed that Indian Creek had high pH levels, which is “indirectly caused by the relationship between high nutrient levels and algae growth.” (2014AR-00731.) Other data collected by PADEP showed “severe swings in dissolved oxygen.” (2014AR-00732.) The EPA’s TMDL Program Manager, Thomas Henry, explained that excess nutrients “impact both in-stream dissolved oxygen concentrations and algal growth.” (EPA0007686-0007687.) Based on this data, the EPA’s decision to approve Pennsylvania’s 303(d) list was reasonable, and certainly not arbitrary or capricious.

Next, Plaintiffs dispute the evidence the EPA relied upon to determine the numerical value of the nutrient TMDL. Plaintiffs challenge the EPA’s use of the stressor-response methodology,

urging that the EPA ignored the Scientific Advisory Board’s report that concluded the stressor-response approach should be used “in conjunction with other methodologies.” (Am. Compl. ¶ 116.)

The EPA defends its use of stressor-response approaches, noting that the Board advised that “the stressor-response approach is a legitimate, scientifically based method for developing numeric nutrient criteria if the approach is appropriately applied (i.e. not used in isolation but as part of a weight-of-evidence approach).” (2014AR-00259.) The EPA explains that it considered several different lines of evidence, including frequency-based distribution analyses, phosphorus targets recommended in scientific literature, and a mechanistic model. (Def.’s Resp. to Pls.’ Summ. J. Mot. at 6.)

I must afford great deference to agency decisions involving complex scientific data within the agency’s technical expertise, such as an agency’s choice of modeling. Balt. Gas & Elec. Co. v. NRDC, 462 U.S. 87, 103 (1983). “An agency’s use of a model is arbitrary if that model ‘bears no rational relationship to the reality it purports to represent.’” Columbia Falls Aluminum Co. v. EPA, 329 U.S. App. D.C. 221, 230, 139 F.3d 914 (1998); see also Texas v. United States EPA, 91 F.4th 280, 297 (5th Cir. 2024).

The EPA’s use of the stressor-response approach to develop the Indian Creek TMDL was not arbitrary or capricious. The EPA used stressor-response analyses to evaluate the relationship between nutrient concentrations and measurements related to a water body’s designated use. (Def.’s Summ. J. Mot. at 19.) As Plaintiffs concede, the stressor-response methodology “is accepted in the field of stream nutrient standard development” and “some correlation may exist between high phosphorous levels and degraded invertebrate populations.” (Am. Compl. ¶ 89.) The EPA adequately explained that the stressor-response approach is helpful to determine a numeric value for a nutrient TMDL because it can show a relationship between excess nutrients (the

“stressor”) and dissolved oxygen, algal growth, and macroinvertebrate health (the “responses”). The EPA does not dispute that the stressor-response approach may only show a correlation between nutrients and impairments, not a causative link, and agrees with the Board’s finding that it should be used in conjunction with other methods of analysis. The EPA has articulated a rational relationship between stressor-response models and development of a nutrient TMDL.

Moreover, in line with the Scientific Advisory Board’s guidance, the EPA followed a “weight-of-the evidence” approach and did not rely exclusively on stressor-response analyses. Tetra Tech’s 2007 and 2012 Nutrient Endpoint Reports relied on 22 lines of evidence including frequency distribution-based analyses, scientific literature review, and a mechanistic model. The total phosphorus TMDL established was 40 micrograms/liter ($\mu\text{g/L}$). I note that other lines of evidence identified a range of targets as low as 2 $\mu\text{g/L}$ and as high as 100 $\mu\text{g/L}$. The record is clear that the Indian Creek TMDL was not derived solely from stressor-response models. The EPA relied on several different methodologies in developing the Indian Creek TMDL, consistent with the Board’s guidance. Plaintiffs have failed to show that the EPA’s use of the stressor-response approach was arbitrary or capricious.

Lastly, Plaintiffs assert that the Tetra Tech report used to develop the TMDL failed to use site-specific data. (Am. Compl. ¶¶ 85-87.) Plaintiffs point to a Federal Regulation stating that “site-specific information should be used whenever possible” to argue that the EPA’s use of data from outside Indian Creek Watershed is contrary to law. 40 C.F.R. § 130.7(c)(1)(i).

The EPA is not, however, required to rely solely on site-specific information. The EPA explained that it used site-specific data when possible but used outside data when site-specific data was unavailable or impractical. (Def.’s Resp. to Pls.’ Summ. J. Mot. at 7-8.) Site-specific information was used in the EPA’s mechanistic model, which indicated a more stringent

phosphorus target of 20-33 µg/L should be imposed. In other methodologies, site-specific information was not available or practical, so Tetra Tech relied on data from watersheds with similar geology and climactic conditions. (EPA0012504.) An ecoregional approach was used “[d]ue to the limitation of watershed size[] and the difficulty in obtaining stressor response gradients” in Indian Creek Watershed. (EPA0012503.)

“[T]he choice of scientific data and statistical methodology to be used is best left to the sound discretion of the [EPA].” Nat’l Ass’n of Metal Finishers v. EPA, 719 F.2d 624, 657 (3d Cir. 1983), rev’d on other grounds sub nom. Chem. Mfrs. Ass’n v. NRDC, 470 U.S. 116, 105 (1985). I will not second-guess the EPA’s choice of scientific data or methodology when it has provided a rational explanation for its decision. Accordingly, the EPA’s use of the stressor-response approach and regional data to develop the Indian Creek TMDL was not arbitrary or capricious.

2. Response to Comments

In addition to challenging the EPA’s methodology for determining the TMDL, Plaintiffs also contend that the EPA failed to adequately respond to public comments. Following the publication of Tetra Tech’s 2007 Nutrient Endpoint Report, the EPA published a draft Indian Creek TMDL and issued a public notice seeking comment. Plaintiffs responded with twenty-seven comments that challenged “the EPA’s correlation between stream impairment and nutrient concentration” and “questioned whether the EPA considered the cost of any treatment plans that may be necessary to meet the proposed TMDL nutrient endpoints.” (Am. Compl. ¶ 94-95.)

EPA regulations require the EPA to “promptly issue a public notice seeking comment” for a proposed TMDL. 40 C.F.R. § 130.7. Plaintiffs do not dispute that the EPA did so in this case. The TMDL can be issued “[a]fter considering public comment and making any revision [the EPA] deems appropriate.” 40 C.F.R. § 130.7.

An agency's failure to respond to public comments can indicate that an agency's decision was not based on consideration of the relevant factors and was, thus, arbitrary. Here, however, the record demonstrates that the EPA did consider the relevant concerns raised in public comments and issued a comprehensive document responding to those comments. (EPA0000115-EPA0000225.) In fact, Plaintiffs note that the "EPA responded to the multiple comments challenging use impairment and nutrient concentration." (Am. Comp. ¶ 98.) The Response Document also addressed comments about whether the EPA considered cost of implementation when establishing the TMDL, explaining that "[n]either the CWA nor EPA's implementing regulations require the state or EPA to consider the costs to implement the TMDL when establishing the TMDL." (EPA0000142.)

Plaintiffs fail to specify which comments were not considered or why the Response Document was insufficient to address public comments. Plaintiffs take issue with the fact that the EPA did not agree with their comments concerning the methodology used to develop the TMDL. But the EPA's rejection of Plaintiffs' concerns does not demonstrate that its decision was arbitrary or capricious. The record reflects that the EPA considered public comments and revised as it saw necessary. Nothing more is required.

3. TMDL Applies Annually

Lastly, Plaintiffs take issue with the establishment of the TMDL annually instead of during the growing season from April to October. (Am. Comp. ¶ 196.) Plaintiffs argue that the TMDL was established to prevent excessive algal growth and low dissolved oxygen, which are typically only impacted during the warmer, growing season. *Id.* Therefore, Plaintiffs urge that the establishment of the TMDL year-round is arbitrary.

The EPA explains that "[b]ecause phosphorus loads from *outside* of the growing season may remain in the system and impact phosphorus concentrations *during* the growing season, EPA

used modeling to identify what daily, season, and annual loads would ensure that the growing season target was met.” (Def.’s Mot. Summ. J. at 23.) I must give substantial deference to the EPA if it provides a rational basis for its decision. The Indian Creek TMDL establishes annual loads, growing season loads, and maximum daily loads to ensure that phosphorus levels do not exceed 40 µg/L during the growing season. This aligns with Pennsylvania’s statutory requirement that TMDLs be “established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.” 33 U.S.C. 1313(d)(1)(C). The EPA has articulated a rational explanation for why the TMDL applies year-round. Accordingly, Plaintiffs have failed to show that the establishment of an annual TMDL was arbitrary or capricious.

V. CONCLUSION

For the reasons set out above, the EPA’s Motion for Summary Judgment is granted and Plaintiffs’ Motion for Summary Judgment is denied. An appropriate Order follows.